



PI Taniguchi M, Tanimoto T, Torigoe K, Ushio S;  
 XX  
 DR WPI; 1996-252837/26.  
 DR N-PSDB; T32403.  
 XX  
 PT DNA encoding interferon-gamma prodn. - useful  
 to treat and prevent, e.g. viral disease, malignancies and immune  
 disorders

Example A-3-2; Page 36-37; 48pp; English.

XX  
 PS  
 XX  
 CC A novel mouse protein (R99559) induces interferon-gamma (IFN-gamma) prodn. by immunocompetent cells. Its sequence was deduced from that of a cDNA clone (T32403) isolated from a mouse liver library. Recombinant IFN-gamma inducer protein can be produced in high yields using host cells, esp. Escherichia coli, transformed with a vector carrying the cDNA.  
 XX Sequence 157 AA;

Query Match 99.8%; Score 806; DB 17; Length 157;  
 Best Local Similarity 100.0%; Pred. No. 6.2e-77;  
 Matches 157; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NFGRILRCTAVIRININDQVLFVDKRQPVFEDEMDIDOSASEPQTRLIYMKDSEVRGLA 60  
 Db 1 nfgrilhcttavirinindqvlfvdkrqpvfedmdidosasepqttrliykmksevrgla 60

QY 61 VTLVKDSKXSTRSLCKNKNTISFEEMDPENTIDDIQSLDIFLFFQKRVPGHMKMEFESSLYEG 120  
 Db 61 vtlsvkdsksxtscknkisfeemdppenidqslifqkrvpghmkmeffesslyeg 120

QY 121 HFLACQKEDDAFKLILKKDENGDKSVMFTLTNLHQ 157  
 Db 121 hflacqkeddafkllkkdengdksvmtltlnhq 157

RESULT 2  
 ID R92506 standard; Protein; 157 AA.  
 AC XX  
 DT XX  
 DE R92506; 02-SEP-1996 (first entry)

DE Interferon gamma production inducer protein.

XX  
 DE Interferon gamma inducer protein.

XX  
 DE Interferon gamma; inducer; IFN-gamma; immunocompetent cell; antiviral; antitumour; antibiotic; immunoregulatory; platelet-increasing agent; therapy; prevention; condyloma acuminatum; renal cancer; brain cancer; granuloma; mycosis fungoides; rheumatism; allergy; cytotoxicity; AIDS; killer T-cell; interleukin-2; IL-2; tumour necrosis factor; TNF; adoptive immunotherapy; monoclonal antibody.

XX  
 OS musculus.

XX  
 Key Location/Qualifiers  
 Misc-difference 70 /label= Met, Thr

FT PN EP692536-A2.  
 XX  
 PD 17-JAN-1996.  
 XX  
 PF 13-JUL-1995; 95EP-0304906.  
 XX  
 PR 10-FEB-1995; 95JP-0045057.  
 PR 14-JUL-1994; 94JP-0184162.  
 XX  
 PA (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.  
 XX  
 PI Kohno K, Kunikata T, Kurimoto M, Okamura H, Taniguchi M;

Query Match 99.8%; Score 806; DB 17; Length 157;  
 Best Local Similarity 100.0%; Pred. No. 6.2e-79;  
 Matches 157; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NFGRILRCTAVIRININDQVLFVDKRQPVFEDEMDIDOSASEPQTRLIYMKDSEVRGLA 60  
 Db 1 nfgrilhcttavirinindqvlfvdkrqpvfedmdidosasepqttrliykmksevrgla 60

QY 61 VTLVKDSKXSTRSLCKNKNTISFEEMDPENTIDDIQSLDIFLFFQKRVPGHMKMEFESSLYEG 120  
 Db 61 vtlsvkdsksxtscknkisfeemdppenidqslifqkrvpghmkmeffesslyeg 120

QY 121 HFLACQKEDDAFKLILKKDENGDKSVMFTLTNLHQ 157  
 Db 121 hflacqkeddafkllkkdengdksvmtltlnhq 157

RESULT 3  
 ID W15704 standard; Peptide; 157 AA.  
 AC XX  
 DT XX  
 DE 26-JAN-1998 (first entry)

DE Mouse interferon-gamma inducer protein.

XX  
 KW Interferon-gamma; antiviral; antioncotic; radiotherapy; immunoregulatory; antitumor agent; chemotherapy; leukopenia; thrombocytopaenia; immunocompetent cell; asthma; hayfever; rheumatism; interleukin; killer cell.

XX  
 OS musculus.

XX  
 Key Location/Qualifiers  
 Misc-difference 70 /label= Met, Thr

FT PN EP76178-A1.  
 XX  
 PD 09-APR-1997.  
 XX  
 PF 26-SEP-1996; 96EP-0306997.  
 XX  
 PR 20-SEP-1996; 96JP-0269105.

PI Tanimoto T, Torigoe K;  
 XX  
 DR WPI; 1996-070177/08.  
 DR N-PSDB; T92506.  
 XX  
 PT Protein that induces gamma interferon prodn. in immuno competent cells - used e.g. as antiviral or antitumour agent, also induces cytotoxicity of killer cells

XX  
 PS Claim 2; Page 22; 30pp; English.

XX  
 CC This sequence represents the interferon gamma (IFNgamma) inducer protein of the invention. This protein induces IFNgamma production in immunocompetent cells. The protein is useful as an antiviral, antitumour, antiseptic, immunoregulatory and platelet-increasing agent. It can be used for treating or preventing AIDS, condyloma acuminatum, renal or brain cancer, granuloma, mycosis fungoides, rheumatism and allergy. The protein can also be used to induce IFNgamma production in cultured cells. The IFNgamma inducer strongly induces cytotoxicity of killer T-cells and when used with interleukin-2 (IL-2) and tumour necrosis factor (TNF), may improve the effect (or reduce side effects) of adoptive immunotherapy in tumours. The DNA encoding this sequence can be used to produce the protein, which can then be purified (or assayed) using monoclonal antibodies.

XX Sequence 157 AA;

Query Match 99.8%; Score 806; DB 17; Length 157;  
 Best Local Similarity 100.0%; Pred. No. 6.2e-79;  
 Matches 157; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NFGRILRCTAVIRININDQVLFVDKRQPVFEDEMDIDOSASEPQTRLIYMKDSEVRGLA 60  
 Db 1 nfgrilhcttavirinindqvlfvdkrqpvfedmdidosasepqttrliykmksevrgla 60

QY 61 VTLVKDSKXSTRSLCKNKNTISFEEMDPENTIDDIQSLDIFLFFQKRVPGHMKMEFESSLYEG 120  
 Db 61 vtlsvkdsksxtscknkisfeemdppenidqslifqkrvpghmkmeffesslyeg 120

QY 121 HFLACQKEDDAFKLILKKDENGDKSVMFTLTNLHQ 157  
 Db 121 hflacqkeddafkllkkdengdksvmtltlnhq 157



DR N-PSDB; V48227.  
 PT XX  
 PT Use of interleukin-18 to inhibit osteoclast formation - in treatment  
 PT of e.g. hypercalcemia, osteoclastoma, Behcet's syndrome, osteoarcoma, chronic rheumatoid arthritis, deformity ostitis, primary hyperthyroidism and osteoporosis.  
 PT XX  
 PS XX  
 PS Claim 6; Page 19; 56pp; English.  
 CC XX  
 CC Interleukin-18 (IL-18) or a functional equivalent can be used for  
 CC inhibition of osteoclast formation. IL-18 is used for treating or  
 CC preventing osteoclast-related diseases e.g. hypercalcemia, osteoclastoma  
 CC Behcet's syndrome, osteosarcoma, arthropathy, chronic rheumatoid  
 CC arthritis, deformity ostitis, primary hyperthyroidism, osteopenia and  
 CC osteoporosis.  
 XX  
 SQ Sequence 157 AA;  
 Query Match 99.8%; Score 806; DB 19; Length 157;  
 Best Local Similarity 99.4%; Pred. No. 6.2e-79; Indels 0; Gaps 0;  
 Matches 156; Conservative 0; Mismatches 1; Delins 0; Gaps 0;  
 AC XX  
 AC 1 NFGRLHCTTAVIRNINDQVLFVDRKROPVFEDEMDIDODASAPORTRLIYKSEVRGLA 60  
 Db 1 nfgrlhcttavirnindqvlfvdrkrqpvfedmdidodasaportrliyksevrglia 60  
 QY 61 VTLVKDKSXTSLCKNKITISFEEMPPNDIDODASLIFQRFKRVPGHNMFEFESLYEG 120  
 Db 61 vtlsvkdkstxslcknkisfeemppndidodaslfqrfkrvpghnkmetesslyeg 120  
 QY 61 VTLVKDKSXTSLCKNKITISFEEMPPNDIDODASLIFQRFKRVPGHNMFEFESLYEG 120  
 Db 61 vtlsvkdkstxslcknkisfeemppndidodaslfqrfkrvpghnkmetesslyeg 120  
 QY 121 HFLACQKEDDAFKLILKKDENGDKSVMFTLNLHOS 157  
 Db 121 hflacqkedaafklilikkdengdksvmtltnhqs 157  
 QY 121 HFLACQKEDDAFKLILKKDENGDKSVMFTLNLHOS 157  
 Db 121 hflacqkedaafklilikkdengdksvmtltnhqs 157  
 RESULT 6  
 ID W77159  
 ID standard; protein; 157 AA.  
 AC XX  
 AC W77159;  
 AC XX  
 DT 26-NOV-1998 (first entry)  
 DE Murine interleukin-18 protein (IL-18).  
 XX  
 KW Murine; interleukin-18 receptor; IL-18R; cytokine; signal transduction;  
 KW immune system; treatment; autoimmune; allergic disease;  
 KW immunosuppressant.  
 OS Mus sp.  
 XX  
 FH Key Location/Qualifiers  
 FT Misc-difference 70  
 FT /note= "Met or Thr"  
 PN EP864585-A1.  
 XX  
 PD 16-SEP-1998.  
 XX  
 PP 23-DEC-1997; 97EP-0310517.  
 XX  
 PR 09-OCT-1997; 97JP-0291837.  
 PR 12-MAR-1997; 97JP-0074697.  
 PR 28-JUL-1997; 97JP-0215488.  
 PA (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.  
 XX  
 PI Kurimoto M, Okura T, Toriooe K;  
 XX  
 DR WPI; 1998-469188/41.  
 XX  
 PT Sequence 157 AA;  
 Query Match 99.8%; Score 806; DB 19; Length 157;  
 Best Local Similarity 99.4%; Pred. No. 6.2e-79; Indels 0; Gaps 0;  
 Matches 156; Conservative 0; Mismatches 1; Delins 0; Gaps 0;  
 AC XX  
 AC 1 NFGRLHCTTAVIRNINDQVLFVDRKROPVFEDEMDIDODASAPORTRLIYKSEVRGLA 60  
 Db 1 nfgrlhcttavirnindqvlfvdrkrqpvfedmdidodasaportrliyksevrglia 60  
 QY 61 VTLVKDKSXTSLCKNKITISFEEMPPNDIDODASLIFQRFKRVPGHNMFEFESLYEG 120  
 Db 61 vtlsvkdkstxslcknkisfeemppndidodaslfqrfkrvpghnkmetesslyeg 120  
 QY 121 HFLACQKEDDAFKLILKKDENGDKSVMFTLNLHOS 157  
 Db 121 hflacqkedaafklilikkdengdksvmtltnhqs 157  
 RESULT 7  
 ID W63811  
 ID W63811 standard; protein; 157 AA.  
 AC XX  
 AC W63811;  
 DT 28-SEP-1998 (first entry)  
 XX  
 DE Mouse IL-18 protein fragment.  
 XX  
 KW Interleukin-18; IL-18; murine; treatment; autoimmune disease; antibody;  
 KW immunosuppressant; inhibitor; receptor protein; detection.  
 XX  
 OS Mus sp.  
 XX  
 FH Key Location/Qualifiers  
 FT Protein 1..157  
 FT /label= IL-18  
 FT  
 FT Misc-difference 69  
 FT /label= Met or Thr  
 XX  
 PN EP850952-A1.  
 XX  
 PD 01-JUL-1998.  
 XX  
 PP 23-DEC-1997; 97EP-0310555.  
 XX  
 PR 28-JUL-1997; 97JP-0215490.  
 PR 26-DEC-1996; 96JP-035626.  
 PR 21-FEB-1997; 97JP-005226.  
 PR 06-JUN-1997; 97JP-0163490.  
 XX  
 PA (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.



PR	12-OCT-1998;	98JP-0289044;	XX
PR	22-DEC-1998;	98JP-0365023;	XX
PA	(HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.		XX
PT	Nishida Y, Okura T, Tanimoto T, Kurimoto M;		XX
DR			XX
XX	WPI; 2000-118341/11.		
PT	New artificially produced peptide for neutralizing biological activity of interleukin-18, useful for treating and preventing immunopathies - inflammatory disorders and autoimmune diseases -		XX
PS			PS
XX	Disclosure; Page 27; 32pp; English.		
CC	The present sequence is mouse monomeric interleukin-18. This can comprise a part or the whole of the variable region in anti-interleukin-18 antibody for neutralising interleukin-18. This is useful for treating and preventing immunopathies, inflammatory disorders and autoimmune diseases which are caused by excessive immunoreaction. The protein has anti-allergic, anti-inflammatory, immunosuppressive, hematopoietic, leucocytopoietic, antialgic, antipyretic and hepatic-function improving activities.		CC
XX	Sequence 157 AA;		XX
Query Match	99.8%; Score 806; DB 21; Length 157;		
Best Local Similarity	100.0%; Pred. No. 6.2e-79;		
Matches	157; Conservative 0; Mismatches 0; Indels 0; Gaps 0;		
QY	1 NGFRUHCTTAVIRNINDQVLFVDKRQPVFEDMDTIDOSASEPQTRLIYMKDSEVRGLA 60		QY
Db	1 nfgrlhcttavirnindqylfvdkrqpvfedmdtidqsasepqttrliykydsevrgla 60		Db
QY	61 VTLVKDSKXSTLSCKNKTIISFERMDPENIDDIOSDILFFDKRVPCHNKMFESSLYEG 120		QY
Db	61 vtlsvkdsxstlscknkisfeemdppenidqslifffqkrvpghnkmeffesslyeg 120		Db
QY	121 HFLACQKEDDAFKLKKDENDKSVMFLTNHQ 157		QY
Db	121 hflacqkdeddklfkikkdkengdksvmtltlq 157		Db
RESULT	10		
Y53905	standard; protein; 157 AA.		
XX			XX
AC	Y53905;		AC
XX	13-MAR-2000 (first entry)		XX
DE	Amino acid sequence of a protein that induces IFN-gamma production.		DE
XX			XX
Mouse; interferon gamma production; IFN-gamma; immunocompetent cell; antiviral; immunoregulatory; antigen; mitogen; IFN-gamma susceptible disease; antibacterial; antitumour; blood platelet enhancing agent; hepatitis; herpes syndrome; condyloma; AIDS; bacterial disease; Candidiasis; malaria; solid malignant tumour; renal cancer; mycosis fungoides and chronic granulomatous disease; blood cell malignant tumours such as adult T cell leukaemia; chronic myelogenous leukaemia; and malignant leukaemia; and immune diseases such as allergy and rheumatism.		KW	
XX	Sequence 157 AA;		XX
Query Match	99.8%; Score 806; DB 21; Length 157;		
Best Local Similarity	100.0%; Pred. No. 6.2e-79;		
Matches	157; Conservative 0; Mismatches 0; Indels 0; Gaps 0;		
QY	1 NGFRUHCTTAVIRNINDQVLFVDKRQPVFEDMDTIDOSASEPQTRLIYMKDSEVRGLA 60		QY
Db	1 nfgrlhcttavirnindqylfvdkrqpvfedmdtidqsasepqttrliykydsevrgla 60		Db
QY	61 VTLVKDSKXSTLSCKNKTIISFERMDPENIDDIOSDILFFDKRVPCHNKMFESSLYEG 120		QY
Db	61 vtlsvkdsxstlscknkisfeemdppenidqslifffqkrvpghnkmeffesslyeg 120		Db
QY	121 HFLACQKEDDAFKLKKDENDKSVMFLTNHQ 157		QY
Db	121 hflacqkdeddklfkikkdkengdksvmtltlq 157		Db
RESULT	11		
Y57571	standard; protein; 157 AA.		
XX			XX
AC	Y57571;		AC
XX	06-MAR-2000 (first entry)		XX
FH	Location/Qualifiers		FH
FT	Misc-difference 70	/note= "unspecified residue encoded by AYG"	FT
XX			XX
PN	EP962531-A2.		PN
XX			XX
PD	08-DEC-1999.		PD
OS	Mus sp.		OS
Key			
FH			
FT			
XX			
DE	Murine interleukin 18 protein sequence SEQ ID NO:2.		DE
XX			XX
KW	Murine; interleukin 18; IL-18; potentiator; IgGF; tumour; cancer;		KW
XX			XX
OS	interferon-gamma-inducing factor; growth inhibition; cytostatic.		OS
Mus sp.			Mus sp.



			XX	Key	Location/Qualifiers
			XX	FH	
			XX	FT	
			XX	Misc-difference	7
			XX	/note=	"changed from Cys in wild-type to Ala in mutant"
DE	Mouse interleukin 18 derivative 1.		XX		
XX			XX		
KW	Mouse; interleukin-18; IL-18; osteoclast; hypercalcaemia; osteopenia;		XX		
KW	osteoclastoma; Behcet's syndrome; osteosarcoma; arthropathy; osteoporosis;		XX		
KW	chronic rheumatoid arthritis; deformity ostitis; primary hyperthyroidism.		XX		
OS			XX		
Mus sp.			XX		
XX			XX		
PN	EP861663-A2.		XX		
PD	02-SEP-1998.		XX		
XX			XX		
PF	24-FEB-1998; 98EP-0301352.		XX		
XX			XX		
PR	25-FEB-1997; 97JP-0055468.		XX		
XX			XX		
PA	(HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.		XX		
XX			XX		
PI	Gillespie MT, Horwood NJ, Kurimoto M, Udagawa N;		XX		
XX			XX		
WPI; 1998-448964/39.			XX		
XX			XX		
DR	Use of interleukin-18 to inhibit osteoclast formation - in treatment of e.g. hypercalcaemia, osteoclastoma, Behcet's syndrome, osteoporosis, primary hyperthyroidism and osteoporosis		XX		
PT			XX		
PT			XX		
PS	Disclosure: Page 34; 56PP; English.		XX		
XX			XX		
CC	Interleukin-18 (IL-18) or a functional equivalent can be used for inhibition of osteoclast formation. IL-18 is used for treating or preventing osteoclast-related diseases e.g. hypercalcaemia, osteoclastoma, Behcet's syndrome, osteosarcoma, arthropathy, chronic rheumatoid arthritis, deformity ostitis, primary hyperthyroidism, osteopenia and osteoporosis.		XX		
SQ	Sequence 157 AA;		XX		
Query Match	98.6%; Score 797; DB 19; Length 157;		XX		
Best Local Similarity	98.7%; Pred. No. 5.7e-78;		XX		
Matches	155; Conservative 0; Mismatches 2; Indels 0; Gaps 0;		XX		
QY	1 NFGRHCTAVIRNINDQVLFVDKRQPVFEDMTIDIOSASEPOTRLIYMYKDSEVRGLA 60		XX		
Db	1 nfrghattavirnindqvlfvdkrqpfedmtidiosasepqrliylymkdsevr gla 60		XX		
QY	61 VTL SVKDSKXTLSCKNKISFEEMDPPEINTDDQSLIFQKRYPGHNMKEFESSLYEG 120		XX		
Db	61 vtlsvkdsksxtlscknkisfeemdppeintddqslifqkrypghnkmefesslyeg 120		XX		
QY	121 HFLACQKEDDAFKLIKKDKENGDKSYMFITNLHQ 157		XX		
Db	121 hflacqkeddafklikkdkengdksymfitnlhq 157		XX		
RESULT	14		XX		
W48968	W48968 standard; Peptide; 157 AA.		XX		
ID			XX		
XX	25-SEP-1998 (first entry)		XX		
DE	Mutant mouse interferon-gamma inducing factor mIGIF/Mu11.		XX		
XX			XX		
DE	Interferon-gamma inducing factor; interferon-gamma; killer cell; antitumour agent; antiviral agent; antimicrobial agent; tumour; mIGIF; hepatitis; malaria; tuberclosis; renal carcinoma; rheumatism; AIDS; osteoporosis; thrombopenia; acquired immunodeficiency syndrome.		XX		
XX			XX		
OS	Mus sp.		XX		
OS	Synthetic.		XX		
RESULT	15		XX		
W77091	W77091 standard; Peptide; 157 AA.		XX		
ID			XX		
XX	W77091;		XX		
AC	W77091;		XX		
XX			XX		
DT	16-NOV-1998 (first entry)		XX		

DE Mouse interleukin 18 derivative 2.  
 XX  
 KW Mouse; interleukin-18; IL-18; osteoclast; hypercalcaemia; osteopenia;  
 KW osteoclastoma; osteosarcoma; arthropathy; osteoporosis;  
 XX chronic rheumatoid arthritis; deformity ostitis; primary hyperthyroidism.  
 OS Mus sp.  
 XX  
 PN EP861663-A2.  
 XX  
 PD 02-SEP-1998.  
 XX  
 PF 24-FEB-1998; 98EP-0301352.  
 XX  
 PR 25-FEB-1997; 97JP-0055468.  
 XX  
 PA (HAYB ) HAYASHIBARA SEIRUTSU KAGAKU.  
 XX  
 PT Gillespie MT, Horwood NJ, Kurimoto M, Udagawa N;  
 XX DR  
 XX WPI; 1998-448964/39.  
 PT Use of interleukin-18 to inhibit osteoclast formation - in treatment  
 PT of e.g. hypercalcemia, osteoclastoma, Behcet's syndrome,  
 PT osteosarcoma, chronic rheumatoid arthritis, deformity ostitis,  
 XX primary hyperthyroidism and osteoporosis  
 XX  
 PS Disclosure; Page 34-35; 56PP; English.  
 XX  
 CC Interleukin-18 (IL-18) or a functional equivalent can be used for  
 CC inhibition of osteoclast formation. IL-18 is used for treating or  
 CC preventing osteoclast-related diseases e.g. hypercalcemia, osteoclastoma  
 CC Behcet's syndrome, osteosarcoma, arthropathy, chronic rheumatoid  
 CC arthritis, deformity ostitis, primary hyperthyroidism, osteopenia and  
 CC osteoporosis.  
 XX  
 Sequence 157 AA;  
 SQ

Query Match 98.5%; Score 796; DB:19; Length 157;  
 Best Local Similarity 98.7%; Pred. No. 7. 3e-78;  
 Matches 135; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 NFERLHCTTAVIRNINDQQLFVDRKRPQFEMTDIDQSASEPOTRILYMKDSEVRGLA 60  
 DB 1 nfrlhcttavirnindqqlfvdrkrpqfedmtdqasasepatrillymkdsevr gla 60  
 QY 61 VTIISKDKSXSTLCKNKLTSEEMDPPEENIDDIOSDLIFFQKRVPOCHNKEFESSLYRG 120  
 DB 61 vtiiskdksxstlcknkltseemdppeeniddioslifqkrvphnknefesslyrg 120  
 QY 121 HFLACQKEDDAFKLILKKDENGDKSYMFETNLHQ 157  
 DB 121 hflasqkeddafklilikkdengdksvmfetnlhq 157  
 DB 121 hflasqkeddafklilikkdengdksvmfetnlhq 157

